

FIG.1

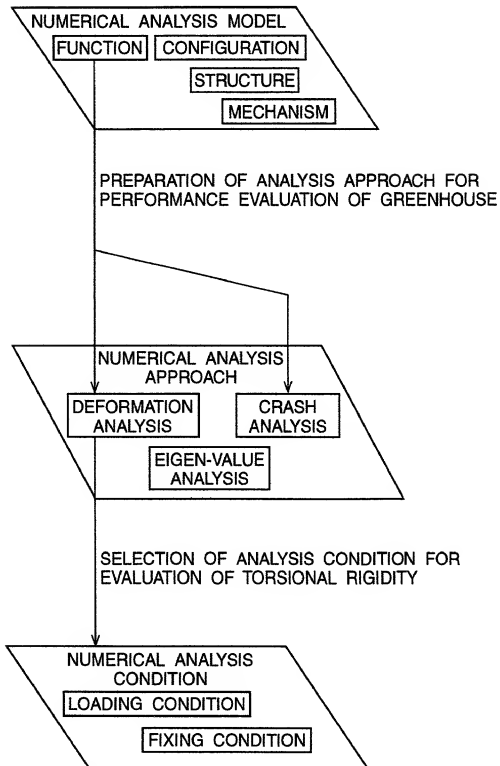


FIG.2

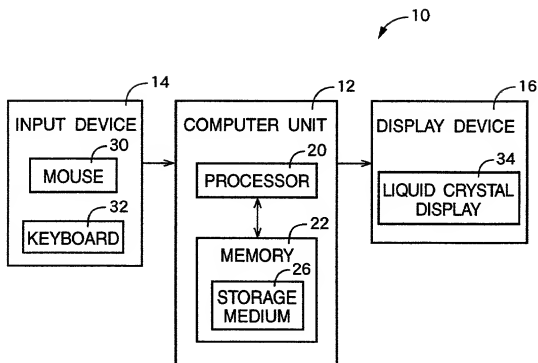


FIG.3

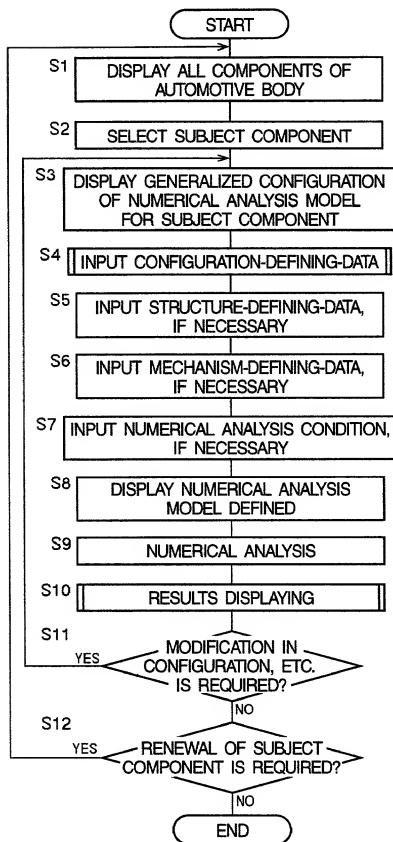


FIG.4

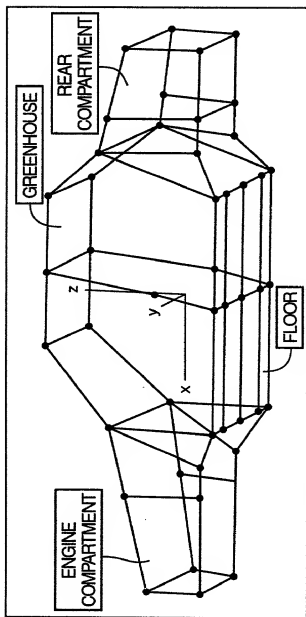


FIG.5

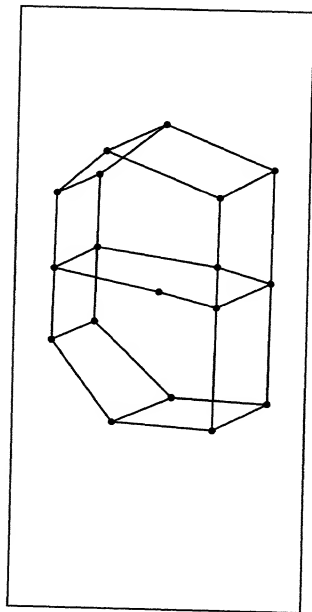


FIG.6

TOP SECRET-00100

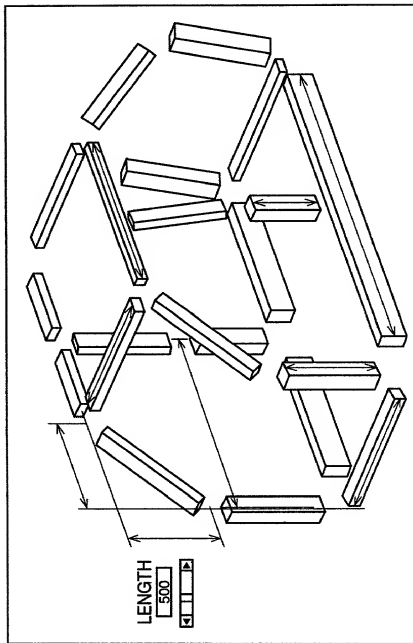


FIG. 7

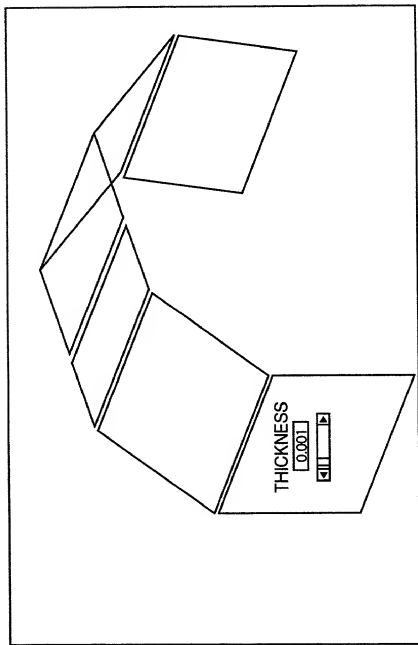


FIG. 8



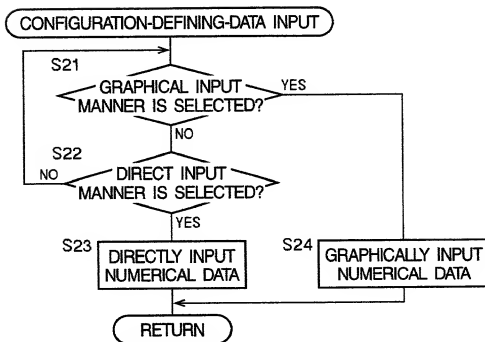


FIG.9

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														
25														
26														
27														
28														
29														

POINT-DATA INPUT SHEET

POINT	X	Y	Z
1	123	12	321
2	456	34	654
3	789	56	987
4	10112	78	121110
5	131415	910	151413
6	123	12	321
7	456	34	654
8	789	56	987
9	10112	78	121110
10	131415	910	151413
11	123	12	321
12	456	34	654
13	789	56	987
14	10112	78	121110
15	131415	910	151413
16	123	12	321
17	456	34	654
18	789	56	987
19	10112	78	121110
20	131415	910	151413

FIG.10

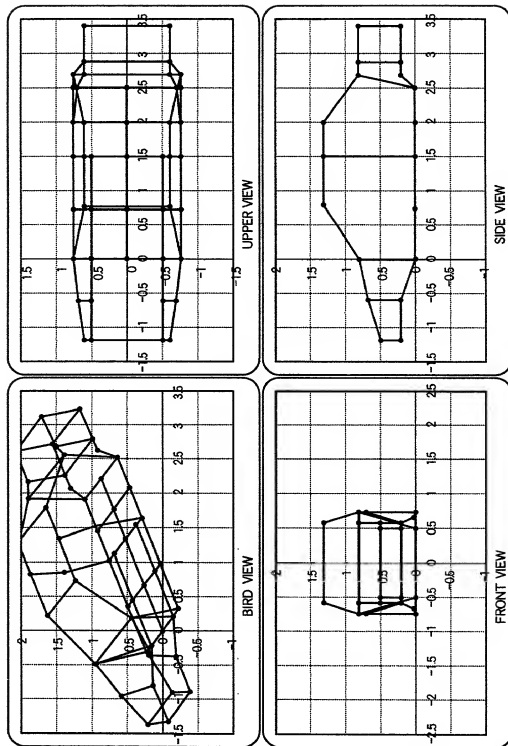


FIG.11

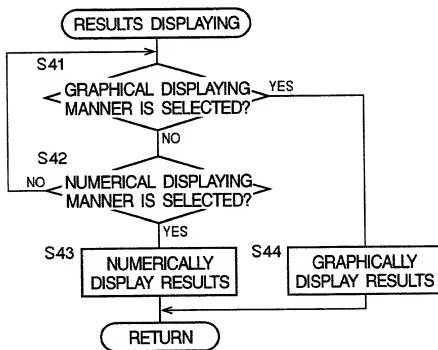
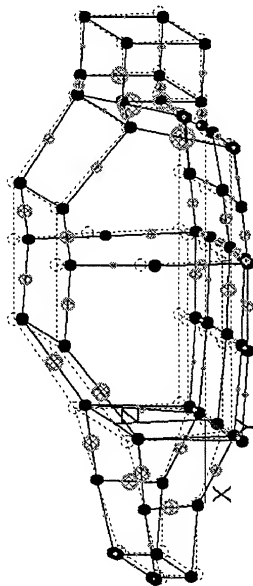


FIG.12



Max Value = 9.9261E-02

Circle Plot of Results (for each Element)

○ Axial\_Force ○ Shear\_Fy ○ Shear\_Fz ○ Torsional\_Moment ○ My ○ Mz ○ Strain\_Energy

Positive  
Negative

FIG. 13

707000 6553600

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
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16														
17														
18														
19														
20														
21														
22														
23														
24														
25														
26														
27														
28														
29														

# ANALYSIS RESULTS SHEET

POINT	X	Y	Z
11	123	12	321
12	456	34	654
13	789	56	987
14	10112	78	12110
15	131415	910	151413

POINT	X	Y	Z
1	123	12	321
2	456	34	654
3	789	56	987
4	10112	78	12110
5	131415	910	151413
6	123	12	321
7	456	34	654
8	789	56	987
9	10112	78	12110
10	131415	910	151413

FIG.14

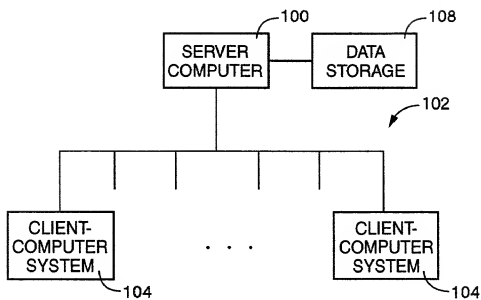


FIG.15

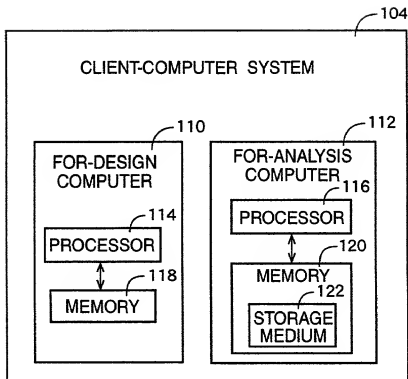


FIG.16



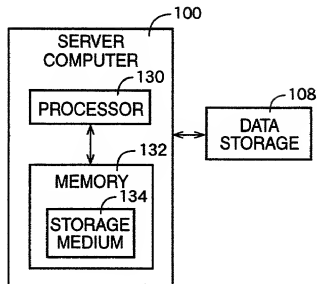


FIG.17

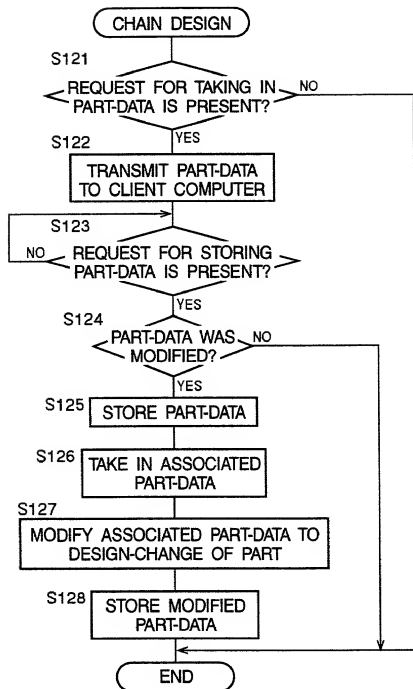


FIG.18

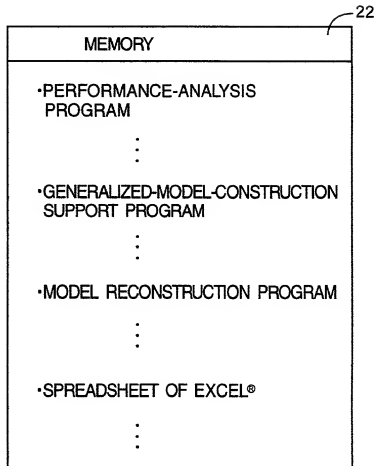


FIG.19

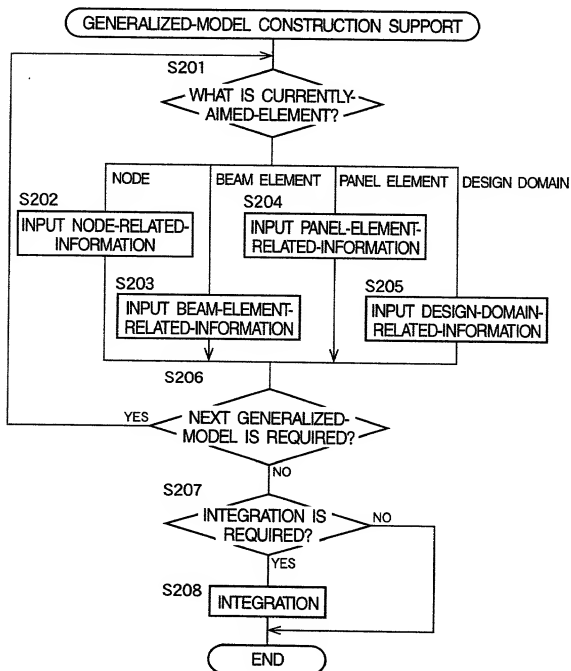


FIG.20

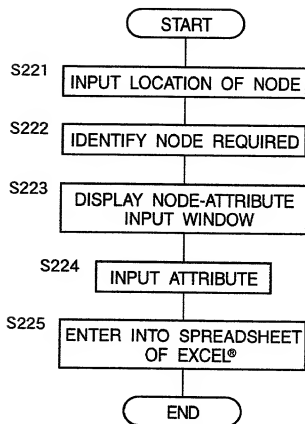


FIG.21

NODE-ATTRIBUTE INPUT

BOUNDARY CONDITION		
FIXING CONDITION		LOADING CONDITION
<b>DEGREE OF FREEDOM</b>	<b>SPRING STIFFNESS</b>	<b>LOAD</b>
<input type="checkbox"/> X	0	F_X 0
<input type="checkbox"/> Y	0	F_Y 0
<input type="checkbox"/> Z	0	F_Z 0
<input type="checkbox"/> Rot_X	0	M_X 0
<input type="checkbox"/> Rot_Y	0	M_Y 0
<input type="checkbox"/> Rot_Z	0	M_Z 0
<input type="button" value="ALL"/>		
<input type="button" value="OK"/>		

FIG.22

NUMBER OF NODES		NUMBER OF ELEMENTS							
8		10							
LOADING : L LOAD VALUE(E.G.:L10) CONSTRAINT : IF CONSTRAINED(=1) BY-BUSHING CONSTRAINT: B SPRING CONSTANT (E.G.:B10)									
NODE NUMBER	X-COORDINATE [mm]	Y-COORDINATE [mm]	Z-COORDINATE [mm]	X- DIRECTION	Y- DIRECTION	Z- DIRECTION	ABOUT X-AXIS	ABOUT Y-AXIS	ABOUT Z-AXIS
1	0	0	0	1	1	1	1	1	1
2	1000	0	0						
3	3000	0	0						
4	4000	0	0						
5	0	0	1000	1	1	L-10000	1	1	1

FIG.23

20250405 09:53:00

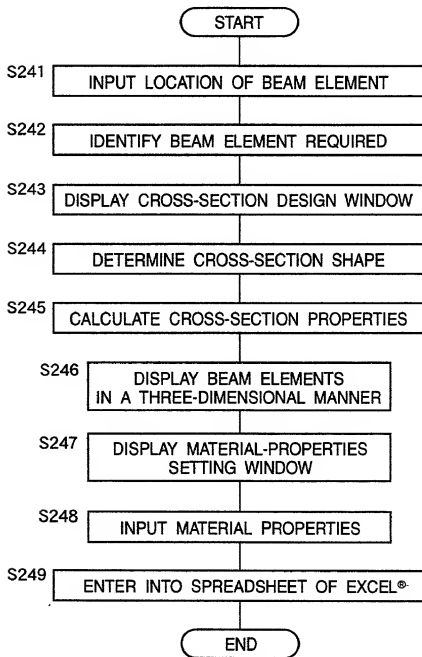


FIG.24



**CROSS-SECTION DESIGN**

**CROSS-SECTION PROPERTIES**

AREA OF CROSS-SECTION = 5.6829E+02 CROSS-SECTION IY = 7.3488E+08 IZ = 1.0230E+10 PRODUCT OF INERTIA IYI = 1.5985E+05 PRINCIPAL AXIS (deg) = 2.3579E+04

ELEMENT NUMBER = 1 ELEMENT MASS = 4.4607E+00 SELECT ENHANCED DISPLAY

**COORDINATES OF ALL POINTS:**

POINT NUMBER, (i, j, k)	X	Y	Z
1	3.3218E+01	5.5767E+01	0.0000E+00
2	5.0000E+01	4.0000E+01	0.0000E+00
3	5.6438E+01	3.0835E+01	0.0000E+00
4	7.0000E+01	4.0000E+01	0.0000E+00
5	8.2784E+01	2.7716E+01	0.0000E+00
6	3.3218E+01	5.5767E+01	0.0000E+00

**SELECTION OF OPERATIONS**

☐ PRODUCTION OF POINT

☐ MOVEMENT OF POINT

☐ PRODUCTION OF LINE

☐ DELETION OF LINE

☐ MODIFICATION OF PROPERTIES

☐ REPRESENTATIVE CONFIGURATION

☐ ALL CLEAR

**COPY OF CROSS-SECTION**

**THICKNESS**

LINE NUMBER	THICKNESS
1	1.20
2	1.20
3	1.20
4	1.20
5	2.40
6	2.40

**THICKNESS = 1.0**

**COLLECTIVE MODIFICATION**

**WIDTH AND LENGTH OF DISPLAY**

WIDTH: 170, LENGTH: 170

**SAVE & EXIT**

**CANCEL**

**FIG. 25**

**MATERIAL PROPERTIES SETTING BUTTON**

FIG. 25

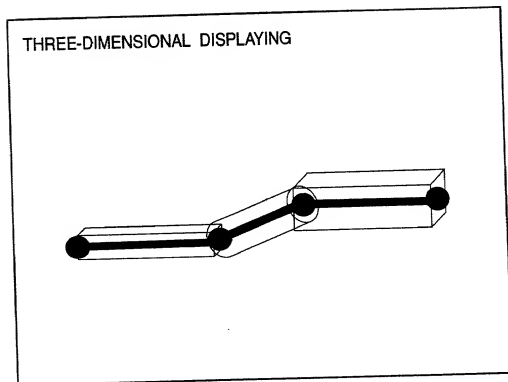


FIG.26

SETTING OF MATERIAL PROPERTIES

MATERIAL OF BEAM ELEMENT

☒ IRON      .....

☐ ALUMINUM      .....

☐ OTHER      .....

FIG.27

ELEMENT NUMBER	NODE1	NODE2	E[N/mm2]	$\nu$	$\rho$ [kg/mm3]	Bush side	ktx	ky	ktz
1	1	2	206000	0.3	7.85E-06				
2	2	3	206000	0.3	7.85E-06				
3	3	4	206000	0.3	7.85E-06				
4	5	6	206000	0.3	7.85E-06				
5	6	7	206000	0.3	7.85E-06				

FIG.28

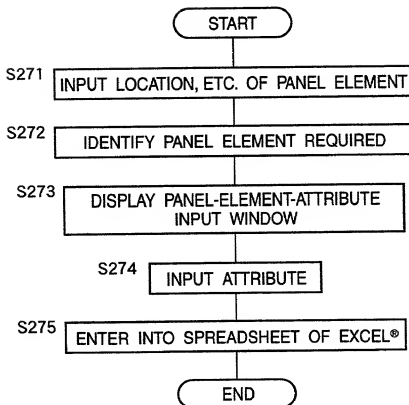


FIG.29

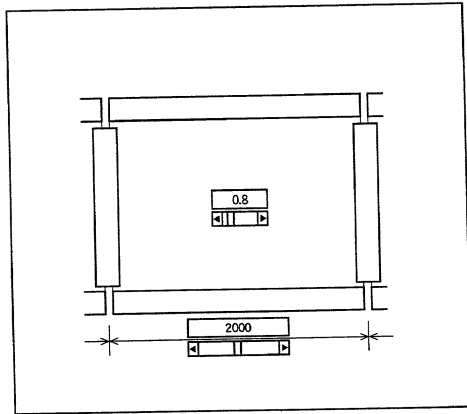


FIG.30

PANEL-ELEMENT-ATTRIBUTE INPUT

MATERIAL OF PANEL ELEMENT

● IRON .....  
○ ALUMINUM .....  
○ OTHER .....

FIG.31

ELEMENT	NUMBER	NODE 1	NODE 2	NODE 3	NODE 4	E[N/mm <sup>2</sup> ]	$\nu$	Thickness
	1	2	3	7	6	206000	0.3	0.8
	2	3	4	8	7	206000	0.3	0.8

FIG.32



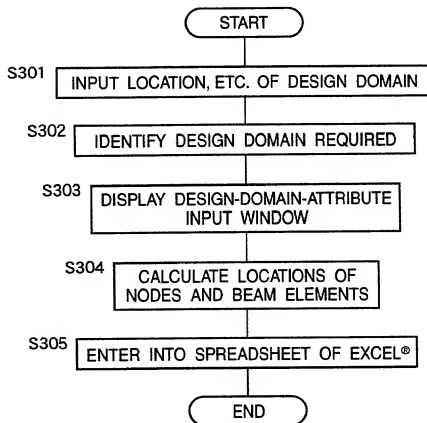
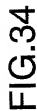


FIG.33



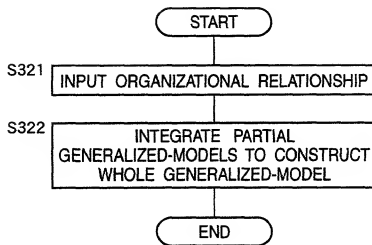


FIG.35

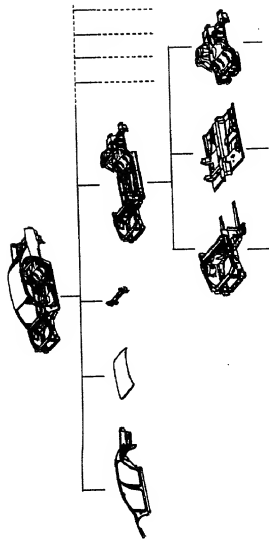


FIG. 36

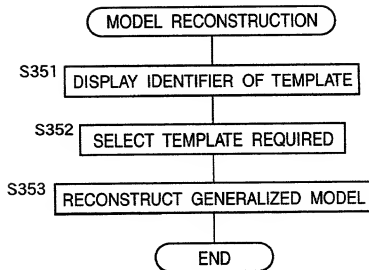


FIG.37

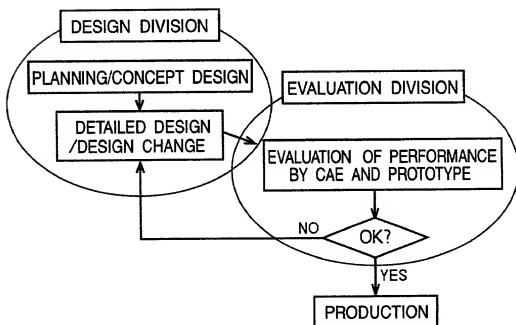


FIG.38